NEVADA'S CONSERVATION DISTRICTS:

The Best Kept Secret in Nevada

Conservation Districts are a governmental subdivision of the State of Nevada and are unique locally-led and locally-elected conservation agencies. Conservation Districts are established in all 50 States and U.S. Territories. Nevada's 28 conservation districts operate under the auspices of Nevada Revised Statutes, Chapter 548. The Governor appointed State Conservation Commission guides and regulates the districts through the assistance of the Division of Conservation Districts staff in the Nevada Department of Conservation and Natural Resources.

Conservation districts work for the conservation and proper development of the state's renewable natural resources by taking available technical, financial and educational resources, and coordinating them to meet the needs of landowners and land users. They often work in cooperation with counties, the USDA Natural Resources Conservation Service as well as other public and private agencies for the conservation of soil, water and related natural resources.

It has been said that Nevada's Conservation Districts are the best kept secret in the state. Board supervisors serve without pay, and volunteer many hours to see their locally identified projects to completion. In 2010, conservation districts reported expenditures of over $3.5 million. The State of Nevada provides each of the twenty-eight districts with a yearly grant award of $4,000 to help meet operational costs. Districts ability to utilize partnerships, apply for grant funding and encourage volunteer participation is truly unique.

"Nevada's Conservation Districts – Nevada's Best Kept Secret" **is a compilation of a few of the many conservation district projects and programs implemented throughout the State of Nevada. We hope you enjoy this journey through Nevada.**

CONSERVATION DISTRICT ACTIVITIES
WATER QUALITY

Dayton Valley Conservation District

In 2008 the Dayton Valley Conservation District completed the Middle Carson River streambank stabilization and restoration project MCR 030. The project was located in the Dayton Valley area of Lyon County, Nevada. This project involved working with several landowners along 1,800 linear feet of streambank. The goals of the project were to reduce accelerated rates of erosion, enhance riparian vegetation, improve wildlife habitat and improve water quality.

Construction involved re-grading existing vertical streambanks to 3:1 slopes and installing rock streambarbs, rock toe protection, and rock refusal trenches. These were done to insure the integrity of the project and to encourage deposition of suspended sediments during high flow events, such as annual spring run-off.

During the fall and spring months, bioengineering treatments were installed utilizing dormant willow cuttings in the form of vertical willow bundles and pole plantings. Associated with the willow plantings the entire project area was seeded with creeping wild rye and other native grasses.

During this project, 190 willow bundles were planted, 1100 feet of erosion control matting was installed, and approximately 4.5 acres were re-seeded. The Dayton Valley Conservation District thanks the Quilici and Hardy Ranches for their assistance with this project.

DVCD District Manager working with local elementary and high school students building willow bundles for planting along the riverbank during Carson River Workdays.

The DVCD continues river restoration work along the Carson River in Lyon County Nevada. The DVCD, along with assistance and support from Lyon County and funding from the NV State Lands “Question One” Bond program, will be constructing another project to focus on approximately 1,200 linear feet of streambank. The project designs will incorporate the use of rock structures and bioengineering treatments to reduce accelerated rates of erosion, establish riparian vegetation, improve wildlife habitat and water quality. The Rolling A property will be managed by the DVCD and will be maintained until 2027. River restoration, floodplain rehabilitation, and noxious weed abatement will be the primary focus of the project. A trail head with a parking facility, restroom, and an informational kiosk will be included.

For nine (9) years the DVCD, USDA’s Western Nevada RC&D, and the River Wranglers have organized Annual Carson River Workdays in Lyon County. This past year, Dayton, Silver Stage, and Fernley High School students taught more than 400 elementary school children in the outdoor classroom along the banks of the Carson River. Students wrapped willow bundles, tested water quality, and learned about the Carson River watershed and the animals that depend on the river for survival. The Annual Carson River Workdays provide opportunities for both high school and elementary school students to study the Carson River and the watershed. The local high school students team up with approximately 3 to 6 elementary school children for the day and teach them about the many benefits the Carson River Watershed provides their local community.

***Above* - Vertical willow bundles planted just 18 days earlier. Please note willows already starting to leaf out and grow. There was a 95% success rate at this restoration site.**

***Left* - Local Dayton Valley Landowner assisting DVCD with planting horizontal willow bundles under Rip Rap, a form of bio-engineering which has been proven successful in re-establishing native vegetation.**

Left **- High school student volunteers re-seeding the riverbank with a native seed mix hoping to establish vegetation.**

Right **- High school student volunteers placing erosion matting as a measure of protection against further erosion and stabilizing a disturbed riverbank.**

Left **- Streambarbs reduce further streambank soil erosion, improve water quality, enhances riparian species habitat recruitment and provides improved wildlife habitat conditions.**

Right **- Sloping vertical streambank to a 3:1 slope in preparation of the installment of rock streambarbs.**

Esmeralda Conservation District

The Esmeralda Conservation District purchased a well camera to provide services to the general public and well water users and irrigators. A majority of rural residents have their drinking water supplied by private wells. It is critical that these wells function properly and are free of pollutants and ground water contamination inflows into wells. The Esmeralda Conservation District uses a down-well camera to supplement evaluation of the condition of a well and to gain an understanding of groundwater impacts. The camera captures footage that allows the landowner to check a well casing, depth of casing, presence of seepage at joints, depth to water level that might lead to contamination and other critical places in a water well that can't be seen during a traditional wellhead inspection. Identifying problems in wells used for irrigation by agricultural producers can mean the difference between a successful crop year and a year of struggle.

Lahontan Conservation District

The Lahontan Conservation District leads a weed treatment program in the Lahontan Valley. The District also has a weed program that allows landowners to treat noxious and invasive weeds on their property such as Whitetop, Knapweed and other noxious weeds using manual and chemical treatments.

The LCD continues with the channel clearing, snagging and debris removal projects along the Carson River by hiring the Nevada Division of Forestry prison crews to remove dead and fallen trees, remove beaver dams, and burn slash piles to improve river flow along the lower Carson River. Having a steady stream reduces erosion and helps reduce the change of the water system caused by obstructions in the river. It also reduces the potential of flood, improves channel capacity, provides safety to the community

in the flood zone, and improves the functionality and management of the lower Carson River. In 2008-2009 LCD did approximately three miles of clearing, snagging, and channel debris removal.

The Lahontan Conservation District partners with the Bureau of Reclamation to assist local producers in evaluating their water deliveries and provide current meter measurements to conserve water. These evaluations review on-farm ditches, slope of the fields, length of fields, and overall efficiency to maximize water allocation. LCD staff has performed over one hundred on farm water measurements to verify farm water charges by the irrigation district.

The Lahontan Conservation District partners with Churchill County, the Stillwater Conservation District, NRCS and the US Fish and Wildlife Service to solve a severe erosion problem. Recent farm and land sales included selling water rights from large parcels. When the active agriculture was removed along with the water, large plots of land began to erode. Signs of the Dust Bowl Days began to emerge, so the LCD Board of Supervisors appealed to partners. A trial reseeding project was begun on Fish & Wildlife Service property to help alleviate erosion damage to adjacent properties. Grass seed was secured from the USDA NRCS Plant Materials Center in Fallon. The LCD and Churchill County did a trial project to learn what could be done to control soil erosion and dust control on properties where water rights have been sold in the Fallon area.

Mason Valley Conservation District

- MVCD field technicians were able to map over 70% of the East Walker River for all weed species listed as noxious by the NV Department of Agriculture, although an 11-mile section of the river was inaccessible.
- Stabilized approximately ½ mile of river bank in last three years on the West Walker River
- Planted over 8000 willow poles
- Restoration efforts prevented approximately 2700 tons of soil from entering the Walker River
- 11 Walker River Basin Workdays held in past two years
- Over 500 students participate every year
- Workdays are held in Bridgeport and Walker, CA; Smith, Yerington, Schurz and Hawthorne, NV
- Over 4000 volunteer hours donated by students, partnering agencies, landowners and community service groups such as Sorpotimist International of Yerington
- 333+ acres of noxious weeds mapped and/or treated in FY 09-10
- Events coordinated with Mason and Smith Valley Conservation Districts, Western Nevada RC&D, University Nevada Cooperative Extension
- Technical assistance provided by NRCS, NV River Wranglers, landowners

Before photo: August 2006- Severe erosion and cut banks due to flooding on the Walker River

After photo: August 2008– After restoration activities on the Walker River (above)

Walker River Restoration Advisory Group

Mason Valley Conservation District and Smith Valley Conservation District continue to participate on the Walker River Restoration Advisory Group (formally Walker River Restoration Steering Committee) which was formed after the authorization of the H.R. 2419 Energy and Water Development Appropriations Act (Public Law 109-103), to oversee Section 208(c)(1) of the appropriation for “tamarisk eradication, riparian area restoration and channel restoration efforts within the Walker River Basin that are designed to enhance water delivery to Walker Lake, with priority given to activities that are expected to result in the greatest increased water flows to Walker Lake.” MVCD provides technical advice to the US Fish and Wildlife Service regarding restoration activities within the basin under the Desert Terminal Lakes Program managed by the F&WLS. Currently planning for implementing river restoration projects is underway; however, noxious weed orientated projects have already begun, including a comprehensive weed inventory and treatment program for the East Walker River managed jointly with Mason and Smith Valley Conservation Districts and treatment of tamarisk infested areas on the Walker River Paiute Reservation.

Northeast Elko Conservation District

Cottonwood Creek Streambank Bioengineering Project

Stream Assessment –
34 square miles
28” annual precipitation
Velocity- 8.6 ft/sec
25 Year Flow- 520 cfs

The restoration site was designed by the USDA Natural Resources Conservation Service using bioengineering techniques. Volunteers helped gather materials for the site: Juniper, Willows, Stakes and Wedges

Smith Valley Conservation District

Watershed Education – Invasive Weed Eradication – Biological Control in the Walker River Basin

The Smith Valley Conservation District partnered with Smith Valley Schools to assist with river education. SVCD treated 120 acres of tall whitetop in northern Smith Valley with herbicides in the spring and summer. A project begun in December 2008 and continuing every year, students helped remove dead biomass and reseeded the area with a dry-land grass mix that according to UNCE should not require supplemental irrigation. The project monitoring of vegetation has proven successful.

Student removing Russian Knapweed

Smith Valley Conservation District released 750 knapweed weevils for biological control of knapweed at various locations in Walker River Basin.

Nevada Tahoe Conservation District

Scientists, researchers, and water quality specialists in the Lake Tahoe Basin have identified untreated stormwater runoff, eroding soils, and impaired or disturbed stream environment zones (SEZ) as key threats to the water quality of Lake Tahoe. NTCD's water quality and erosion control program is focused on identifying and correcting areas where point and non-point source pollution from stormwater runoff, eroding soils, and impaired SEZs are negatively impacting the quality of Nevada Lake Tahoe surface and ground waters.

Rosewood Creek Area F restoration was a $1.2M project on approximately 700 linear feet of creek in Incline Village, NV. The restoration consisted of six structures designed to stabilize and maintain the stream grade and prevent further degradation. Bureau of Reclamation provided primary funding with some additional funds provided by Washoe County and the private landowner. Design, engineering, and permitting were contracted to Valley and Mountain Consultants and the construction was awarded to Herback General Engineering. The grant that NTCD receives from the Conservation Division assists with our in house contribution to the project.

← Pre-Construction Photo

Post Construction Photo →

Air Dispersion Study

NTCD has a $60K contract with the Desert Research Institute (DRI) to study atmospheric deposition of vehicle-generated fine particulate matter as part of a $400K US Forest Service science grant to DRI. NTCD's role is to select sites, deploy atmospheric sampling equipment, and conduct initial data analysis for fine particulate matter at various sites around Lake Tahoe. NTCD will also be DRI's primary resource on basin policies and politics and to be a quick reaction force to deploy equipment when weather conditions are optimal.

Sweeper Efficiency Project

Old Technology Sweeper

New Technology Sweeper

With the support from the grant received from the Nevada Division of Conservation Districts, NTCD was able to prepare and receive a $230K one-year project funded by Nevada Division of State Lands and the US Forest Service. NTCD contracted with DRI to collaborate on the development of the study, collection of the data, and analysis of the results. The study goals are to:

1. Establish a link between the Washoe County "new technology" street sweeping practice/regime and improved water quality. If this relationship is shown to exist, it will help validate street sweeping as advanced source control.
2. Add to the general body of knowledge concerning fine sediment generation on Tahoe area roads.

Data collected includes vacuuming sediment from the road surface, samples from the street sweeper, water quality samples from the stormwater system, and air quality samples using equipment borrowed from the Desert Research Institute.

Washoe-Storey Conservation District

Filled Sediment in a control pond at Mira Loma

The Washoe-Storey Conservation District initiated the development and publishing of the Steamboat Creek Restoration Plan in January 1996 because Steamboat Creek is considered the major contributing tributary of non-point pollution to the Truckee River. Non-Point Source pollution in the forms of excess sediment, nitrogen, phosphorus and trace metals, and has resulted in the tributary as being listed as "target impaired waters" by the Nevada Division of Environmental Protection due to this pollution. The plan was funded by the Nevada Division of Environmental Protection (NDEP) through a Clean Water Act 319(h) grant and a Regional Water Planning Commission grant to promote voluntary efforts by the community to improve water quality. The plan builds upon a fluvial geomorphology study that discusses flow and sediment transport conditions and the potential for physical changes including aggradation, degradation, lateral channel migration, and the potential for excessive bank erosion. The creek originates at the outlet of Little Washoe Lake and meanders for 17.5 miles northeasterly to the Truckee River. The Steamboat Creek drainage basin encompasses approximately 200 square miles. The land within the creek corridor is 98% privately owned. The Plan was developed under the guidance of the Steamboat Creek Steering Committee and Washoe-Storey Conservation District to meet the district's water quality improvement goals.

Unhealthy stream at Hidden Meadows south reach on Steamboat Creek with noxious weeds

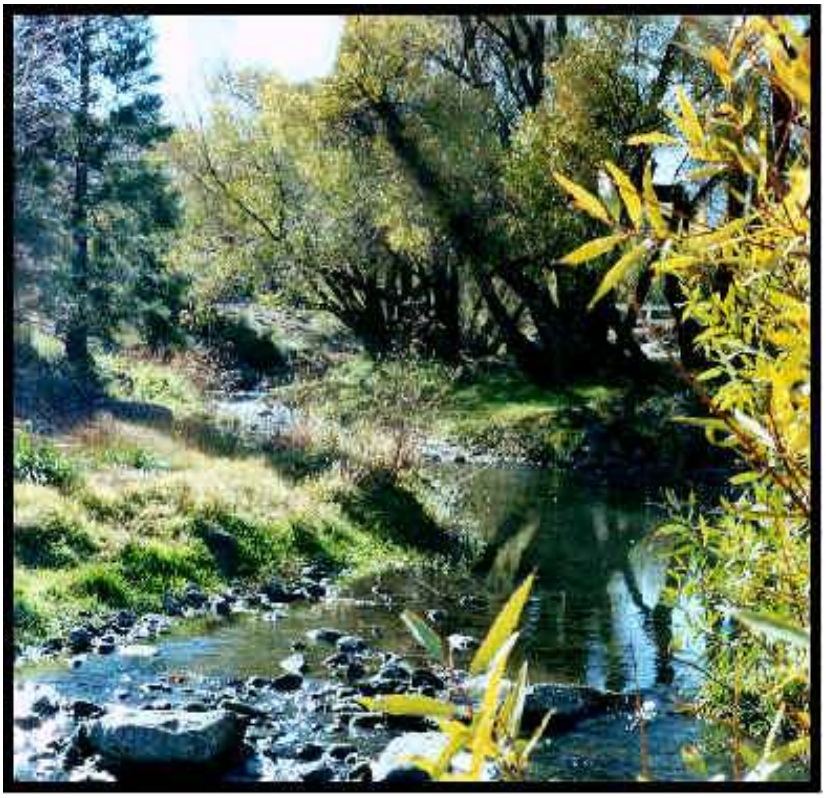
The Washoe-Storey Conservation District has been implementing the plan by restoring stream, wetland and riparian habitat to proper functioning status. In an urban setting that is becoming more and more heavily developed, the

riparian habitat is essential in maintaining a natural stream function. Riparian zones provide canopy cover, stabilize slopes, provide habitat for native species, reduce nutrient loads, minimize public health vector impacts, and help to filter stormwater runoff. These environmental benefits can also lead to economic advantages in drinking water treatment, wastewater treatment, recreation and tourism as well as improved quality of life.

The Steamboat Creek Restoration Plan is a guide for policy makers, landowners, developers, and citizens with interest in land adjacent to Steamboat Creek and its tributaries. The recommendations in the plan are voluntary for current landowners. The plan was developed by studying and inventorying the geomorphologic characteristics of the Creek, approved but unbuilt developments adjacent to the Creek, and existing land use policies around the Creek in order to identify strategies to reduce pollution in Steamboat Creek which ultimately enters the Truckee River.

STEAMBOAT CREEK WATERSHED

Hidden Meadows University Farms: During the last fiscal year, WSCD evaluated options for restoration of Steamboat Creek at Hidden Meadows under a grant from the Bureau of Reclamation and selected a restoration alternative. This restoration alternative considers not only the pond at Hidden Meadows, but also the reach of Steamboat Creek adjacent to the pond, the water entering Steamboat Creek from the Yori Drain, the Airport Authority's wetland mitigation project on the west bank of Steamboat Creek, and the WSCD/Corp of Engineers project at the confluence of Steamboat Creek and the Truckee River.



Good vegetation and healthy stream reach in Pleasant Valley

WSCD will continue with stakeholder involvement and assistance to address community concerns about mercury production, wetlands questions, noxious weed control and other issues.

CONSERVATION DISTRICT ACTIVITIES
EDUCATION

Carson Valley Conservation District

Eagles and Agriculture workshop is a celebration of the beauty of our mountains and ranches, the magnificence of our wildlife, and the bounty of our agriculture. "Eagles and Agriculture" is a unique opportunity to observe the interaction between nature and agriculture.

Sponsored by the Carson Valley Conservation District and other groups, the three day tour offers an opportunity to view and photograph bald eagles and other birds of prey, field demonstrations and a tour of working ranches and historic barns. The eagles and birds of prey come to Carson Valley to feed on rodents and nutrient rich afterbirth during the winter calving season. Tours and workshops educate the public how agricultural stewardship benefits wildlife habitat. Ranchers allow visitor tours of their fields to photograph eagles and other birds while learning about agricultural history back to the 1850's.

This event is designed to:

- Encourage the conservation and prosperity of ranching in western Nevada.
- Promote the benefits agriculture provides to wildlife and the community.
- Teach participants about eagle habits, habitat, and life cycle and the history of agriculture in the Carson Valley.
- Demonstrate an example of agri-tourism that will potentially enhance profitability for local agriculture operations and businesses.

Eagles and Agriculture workshop was also created to be an example of the importance of protecting ranch and farmlands in rural America. Ranches and wildlife habitat are disappearing at an alarming rate. Now, you can see subdivisions where once cattle and mule deer grazed. The greatest threat to wildlife habitat and agriculture today in Nevada is the exponential growth of human population.

The Eagles and Agriculture program has eight different events people can participate in. Additional activities and increased participation in subsequent years has resulted. The program starts with a Friday night banquet featuring bird of prey experts, conservation organizations and Falconers who explain the sport and partnership with agriculture. In the past, the tour has had as much as six 55-passenger buses and over 60 volunteers participate. A typical year of bird sightings include species such as Bald Eagle, Golden Eagle, Red-tailed Hawk, Rough-legged Hawk, Ferruginous Hawk, Coopers Hawk, Sharp-shinned Hawk, Northern Harrier, Swainson's Hawk, Turkey Vulture, Osprey, Prairie Falcon, American Kestrel, Merlin, Burrowing Owl, Great Horned Owl, and the Barn Owl. The Peregrine Falcon is an annual visitor to Carson Valley but sightings are rare.

Owl Prowl is a nighttime adventure designed to show people barn owls, red horned owls, long-eared owls, and screech owls.

Sometimes you see the owls and sometimes the owls see you and sometimes you see nothing at all but its lots of fun.

Conservation District of Southern Nevada

The Christmas Tree Recycling Committee, of which the District acts as treasurer, typically recycles and chips an average of 11,500 trees per year producing 102 tons of chips for mulch and compost. The committee promotes Christmas tree recycling at community outreach events, having folks decorate a recycled CD ornament that they could hang on their tree at home as a reminder to recycle it.

State funding also helps to support programs like the storm drain marking project. State funds are being used as match for a grant CDSN received from the Nevada Division of Environmental Protection (NDEP) to conduct a Stormwater Quality Project including leading a multi-agency Stormwater Quality Management Committee. Eight thousand plaques were installed above storm drains reminding passers-by that what flows into the drains goes to Lake Mead untreated.

Coordinated activities with partners such as Mandalay Bay Hotel and Casino hosted a kick-off event with local meteorologist, Nate Tannenbaum, as master of ceremonies for the event. Guest speakers were comprised of project partners including Shark Reef Aquarium, NDEP, CDSN and many others. April 2008 was proclaimed Stormwater Quality Awareness Month by both the City of Henderson and Las Vegas.

CDSN conducts a Stormwater Pollution Poster Contest promoting the storm water quality awareness message in the new *"Down the Drain: Stormwater and You"* workbook. The winner of the contest is recognized at the Kick-Off Event with a trophy, certificate and a field trip for their entire class on the Forever Earth Science Houseboat at Lake Mead.

On the Forever Earth Houseboat the students learn all about the water cycle and how important the quality of Lake Mead is to the Las Vegas Valley. They conduct hands-on scientific tests to determine water temperature, Ph level, and the clarity of the lake.

The Moapa Demonstration Garden funded by the Department of Air Quality and Environmental Management (DAQEM) was successfully completed. The gardens are located at the Moapa Valley Farm in Overton, Nevada. The garden features water efficient native landscaping in all four of the themed gardens; Native American, Succulent, Butterfly and Hummingbird, and Scrunch n' Sniff.

A student constructed Straw Bale Structure was completed as an educational project with many partners. It is surrounded by the Moapa Demonstration Garden. Grant funded by the Environmental Protection Agency (EPA) and state fund match,

construction for the straw bale structure was started in 2004. The grand opening celebration of both the straw bale structure and the demonstration gardens was held on May 27, 2008 in Overton, NV where Principal Grant Hanevold of Moapa Valley High School presented a plaque to Southwest Homes for their donation of goods and services that aided in completing the structure.

Tomi's Garden, commemorating former CDSN Supervisor and local horticulturist, Nanyu Tomiyasu, at Acacia Demonstration Gardens in Henderson was initiated.

Funding from the High Desert Resource Conservation & Development Council allowed for the purchase of plants, and labor was donated by Capriati Construction. The garden is expected to take several years to finish. Aside from its obvious aesthetic value, Tomi's Garden also has an educational value. An estimated 10% of the visitors that come to the park annually will apply the water smart education to convert about 5 square feet of their own yards to water smart landscaping. That would save about 200,750 gallons of water a year!

Dayton Valley Conservation District

For thirteen (13) years the DVCD, Western Nevada RC&D, and the River Wranglers have organized the annual Carson River Workday in Lyon County. This past year with student assistance from Dayton High School, Fernley High School and Silver Springs High School, over 400 elementary school children participated in the annual event.

The annual event provides the opportunity for elementary school children to visit the Carson River and learn about the watershed they live in. The local high school students team up with approximately 3 to 6 elementary school children for the day and teach them about the many benefits the Carson River Watershed provides their local community.

Lahontan Conservation District

One of the major goals of Lahontan Conservation District is to provide information and education to agricultural producers, other land users, and the general public about our natural resources and the importance of conservation. Like Dayton Valley CD, the LCCD holds a yearly Carson River Work Day at the Rambling River Ranch. One hundred twenty 3rd and 4th grade students from E.C. Best and Lahontan Elementary Schools and their teachers and chaperons spent the day learning about water conservation, wildlife, the water cycle, wetlands, GPS and the Newlands Project.

Lincoln County Conservation District –

The Lincoln County Conservation District is deeply committed to sustaining student activities that promote learning and growth in areas of conservation and agriculture. The LCCD continues their monetary support of local FFA and 4-H Range and Soils judging teams at state and national contests and the Society for Range Management / Nevada Wildlife Federation / Nevada Bighorns Unlimited Nevada Youth Range Camp near Austin each June. This long term involvement with youth provides long term positive results in the education of Nevada's citizenry and their care of our natural resources.

In 2008 LCCD began a partnership with the University of Nevada Cooperative Extension office in Caliente to assist them with a facility for their 4-H farmer's market and demonstration garden; a highly successful and growing enterprise they began the year before. The new outdoor pavilion is located on-site with the conservation district and includes meeting, market, and market preparation space. So far they have removed an old structure and poured a cement slab. Future plans may include enclosing the building.

Nevada Tahoe Conservation District

Native Plant and Invasive Weed Education, Outreach and Treatment

This program includes participation in various workshops, public events and most importantly meeting with individual clients. Outreach to homeowners about invasive weeds, mapping the location of identified invasive weeds and removal of invasive weeds by mechanical techniques is important to Tahoe's natural resources.

The NTCD was awarded $42,000 from National Fish & Wildlife Federation toward a mapping, treatment, monitoring, prevention components, education and outreach effort to eradicate priority noxious weeds throughout the Lake Tahoe Basin. In addition, $10,000 of NRCS funding and $28,000 from the Nevada Division of State Lands, Tahoe License Plate Program is currently being used for invasive weeds identification, education and outreach. Additional funding support was received from the Nevada Division of Conservation Districts through a state grant program.

Technical Assistance for Best Management Practices (BMPs)

The NTCD-BCP (Backyard Conservation Program) delivers technical assistance to private property homeowners in Lake Tahoe, Nevada. An NRCS grant of $370,000 and an NDEP 319 grant of $200,000 are currently funding these activities. Conservation planning efforts are completed on single-family residential properties to meet the objectives of the Best Management Practices (BMP) Retrofit Program in the Lake Tahoe Basin. The NTCD-BCP project also provides technical assistance to land owners regarding: irrigation and water management, nutrient and pest management, mulching recommendations to meet erosion and fuels issues, defensible space landscaping, wildlife habitat improvement, noxious weeds control, and other practices that are identified over the term of this agreement. The grant that NTCD receives continues to support the administrative overhead needed to support these projects.


Technical assistance is provided for homeowners in order to help design needed BMPs

In addition to the work done at the Nevada Tahoe Conservation District pertaining to BMP site evaluation plans, technical assistance site visits and/or final inspections for BMP compliance in Lake Tahoe, Nevada, NTCD conducts neighborhood demonstration projects or “block parties” to homeowners associations, neighborhood communities, and Fire Safe Council Chapters. The BCP’s education and outreach program will continue to be developed and will be carried out by NTCD’s Conservation Planning Group.


Southern Nye County Conservation District

In the spring of 2008 and in continuing years, numerous field trips to Ash Meadows National Wildlife Refuge (AMNWR) were undertaken by the students of five elementary schools from Pahrump and Amargosa. In all, 525 4th and 5th grade students are introduced each year to this remarkable place which is home to the second highest number of endemic species in North America. This "hands on" educational scientific experience includes children measuring the water for acidity, alkalinity and temperature as well as counting the pup fish and other aquatic species swimming over a grid. As some children were "in the field", others were at home base creating works of art which depicted their personal experience at Ash Meadows. One child was so impressed by her experience, she brought her whole family to Devil's Hole the following weekend for the official pup fish count by Death Valley National Park scientists. As the project gains popularity, more trips are scheduled with an anticipated 600 plus students attending each year.

AMNWR, coordinating with the Southern Nye County Conservation District and other Fish and Wildlife employees and volunteers make this a memorable event. They are making an effort to continue this program every year.

Tonopah Conservation District

"BOOTSTRAPS"

BOOTSTRAPS

Transforming Lives & Public Lands

An innovative prevention program sponsored by the University of Nevada Cooperative Extension, Bureau of Land Management, USDA, Conservation Districts, and State Agencies.

Successful Pilot Program Completed – A pilot program with 10 youth was highly successful in completing rangeland projects that formerly were difficult for the land management agencies to complete due to them being smaller size projects that typically had lesser priority for completion. Bootstraps youth in the pilot project (2005) thinned hundreds of acres of pinion and juniper so that range grasses had a chance to compete and fire was less of a danger. Fencing projects helped improve habitat for Sage Grouse. This initial pilot was funded by the Battle Mountain District of the Bureau of Land Management and administered by the University of Nevada Cooperative Extension in cooperation with the Tonopah Conservation District.

"We are impressed with the amount of work they completed," said Mike Stamm, BLM Wildlife Biologist. "It is just amazing how energetic these kids are in spite of the hot weather."

"The Bootstraps experience definitely helped me decide to major in the natural resources area where there are so many job opportunities," said Ulysis Rivas, of Battle Mountain, who plans to attend college in Oregon.

Weed Identification Training

Under the guidance of their Job Coach, Mel Easton, 2008 Tonopah Bootstraps participants surveyed and treated noxious weeds in Northern Nye, Esmeralda, Lander & Eureka Counties. They targeted Russian Knapweed, tall & short whitetop, and thistles.

Weed Inventory:

Participants surveyed 496,570 acres!

- **Esmeralda County**
- **Smith Creek**
- **Grass Valley**
- **Underwood**
- **Upper Reese River**
- **Carico Lake**
- **Paris & Elephant Head**

fire areas (Emergency Rehab & Stabilization Program)

Spraying Tamarisk

Weed Treatment:

Participants treated 588 acres!

- **Galena Canyon**
- **Slaven & Ratfink Canyons**
- **Carico Lake**
- **Fishcreeks**
- **Upper Reese River**
- **Paris & Elephant Head**

fire areas (Emergency Rehab & Stabilization Program)

Weed Identification

Tonopah Bootstraps is a Cooperative Extension education program designed to teach life skills to young adults who are not working and not in school, while helping to control noxious weeds on public lands.

In exit interviews, graduates stated that Bootstraps helped them develop a good work ethic and taught them responsibility. Five earned their NV Pesticide Applicator Certification. Bootstraps alumni are working toward their goals to find meaningful work; and have applied to community college or are working full-time in Tonopah, Round Mountain, Silverpeak, or Utah.

Washoe-Storey Conservation District

The Washoe-Storey Conservation District views education and outreach as a primary way to get volunteers involved in conservation projects and to create community support for conservation efforts. The District put together an education and outreach program to bring conservation education to local schools, as well as to local volunteer and community service groups. This program was funded in part by the Truckee Meadows Regional Stormwater Quality Management Program, and incorporated students in the education department at the University of Nevada Reno (UNR).

The education component of the program focused on Truckee Meadows area schools. The District worked with a graduate student in education at UNR, as well as several student teachers, to create conservation-oriented lesson plans that fit with the Washoe County science curriculum. These lesson plans were developed and used by the student teachers. In this manner, WSCD hopes to bring education and outreach programs to local schools.

At the same time, the District recognizes the need for other outreach programs in the community. Volunteer workdays, public workshops and presentations, and community events provide the District with the opportunity to work with the public towards conservation goals. The District continues to work toward these ends through the following:

- Work with the Steamboat Creek Restoration Steering Committee to provide education to the public.
- Assist with annual cleanup and repair of the Conservation Trail at the arboretum.
- Maintain and expand the WSCD Web page.
- Make the Steamboat Creek Restoration Plan available on the internet
- Create new signs for the Conservation Trail and grass plots at Rancho San Rafael Park.
- Use the Great Basin Habitat development as a teaching tool.
- Develop an educational trail at the Anderson/Bartley Ranch Part restoration site on Washoe County Parks property to educate the public on stream restoration, wildlife habitat, and water quality while providing development options for future development.
- Hold and sponsor the annual Snapshot Monitoring Day to assess watershed health and provide public education and participation.

Virginia Hills - Pinon Pine Restoration Project Overview:

Product Description and Deliverables: The expected outcome for this project is a healthier crop of trees able to withstand normal insect infestations, a healthier forest with less susceptibility to total devastation by wildfire and a more knowledgeable public and private landowner able to properly care for the trees in their charge. There are several pursuits in this project all accomplished with the ultimate goal of a healthy pinyon forest.

• *Insect Eradication:* The major threat to the pinyon population is the "Ips Beetle". They bore into the tree in branches generally greater than five inches in diameter. Their telltale sign is a brick colored globule of dust left on the bark from their boring and bark dust will also be seen around the base of the tree. Since these beetles are active during the spring and summer months, an aggressive plan of spraying the trees or at a reduced initiative, the high value trees during the fall, winter and early months of spring can successfully reduce the beetle's ability to gain a hold on the tree and thereby eliminating future generations of the beetle. An aggressive spraying program to soak branches of five inch diameter and larger will protect a tree for two years.

• *Fuel Reduction:* In order to reduce the forest's susceptibility to devastating wildfire, fuel reduction will be a part of our healthy forest initiative. To accomplish fuel reduction the dead branches at the base of high value trees will be removed as well as other dead fuels such as dead sage and others. Masticating machinery will be brought in to open areas to remove excessive brush growth. This process would remove rows of vegetation, leaving other rows for wildlife food and shelter, and erosion control.

• *Forest Management:* Diseased trees will be eliminated to promote a healthy forest and reduce current and future insect infestation. Tree thinning will be performed to provide proper spacing between healthy and high value trees. This effort will reduce competition for the water, and sunlight resources as well as increase the defensibility of the spaces during a wildfire event.

• *Property Owner Education*: Programs to bring forestry management practices to the individual property owner will be initiated including education at Home Owner Association sponsored events, brochures on proper care of trees including pruning, insect identification, and spraying standards and techniques. Education is also needed in areas where infestations may be brought into pinyon areas from the outside including logging operations and firewood gatherers.

• *Noxious Weed Eradication:* With work crews in the forest, and on home owners land, they will identify species of noxious weeds and spray them while they are on site. This additional task will be completed as crews are available and on site, and this work can be performed quickly and easily with little additional overhead to the project.

RANGE CAMP

Most Conservation Districts participate in, volunteer with, or sponsor a youth (or two) in their district area to participate in Nevada Youth Range Camp. This is an annual activity that provides an excellent opportunity to learn and recreate. It is a week-long camp for 14-18 year olds from Nevada and eastern California. Camp is held every June in central Nevada's Toiyabe Mountains. The Toiyabes are one of Nevada's most impressive mountain ranges with several peaks over 10,000 feet in elevation. June is an ideal time to be in the Toiyabes when numerous wildflowers are in bloom and the vegetation is green from the recent snowmelt. The camp is headquartered at the Big Creek Campground on the Toiyabe National Forest at an elevation of 6,600 feet next to the stream.

The youth of Nevada's communities have the opportunity to learn from professionals that are knowledgeable in the ecology and management of the Great Basin's desert and mountain rangelands. The professionals from state and federal agencies take a break from their busy summer field season to teach the campers. The professionals teach campers about basic field surveying and map reading, identification and importance of rangeland plants, evaluation of sagebrush and woodland ecosystems, wildlife surveying techniques, evaluation of stream health, and many other topics related to rangelands.

The camp focuses on relationships between people and rangeland. Campers learn about plants, wildlife, water, and soil in order to make good decisions about rangeland management and use. The camp teaches about the traditional uses of rangelands by Native Americans and the European settlers. The camp challenges youth to explore resource problems and to create logical solutions. While one week does not create rangeland managers out of campers, it gives them a much greater appreciation of the Great Basin's rangelands and how they are managed.

While the camp is educational, it also offers an enjoyable outdoor experience shared with youth from Nevada and California. Activities include swimming, fishing, hiking, volleyball, horseshoes, and campfires, along with ample opportunities for photography. Many students who participate in Range Camp are enthused by what they learn and choose to enter college with a related degree in natural resource science. Others carry their knowledge and respect for the environment into other professions or return as teachers or volunteers to the camp in later years.